

1 / 1 WPAT - ©Thomson Derwent
AN - 1968-19961Q [00]
TI - Polymeric toning agent pref acrylic for
DC - A00
PA - (RICO) RICOH KK
NP - 4
NC - 4
PN - BE-717572 A 0 DW1968-00 *

JP71006157 B 0 DW1971-08

US3585140 A 0 DW1971-32

DE1772825 B 0 DW1972-30
PR - 1967JP-0044062 19670710
AB - BE-717572 A

A toning agent for an electrophotographic developer comprises a pigment onto which a vinyl copolymer is graft polymerised, or a mixture of pigment and copolymer.
The copolymer contains at least one monomer from each of 3 groups (1) $R_1CH=CXR_1$, (2) $R_1CH=CYR_1$ and (3) $R_1CH=CZR_1$ where R_1 is H, COOH, CN, Cl, C_nH_{2n+1} ($1 \leq n \leq 5$); X is from $-COOR_2$ (in which R_2 is C_nH_{2n+1} ($4 \leq n \leq 20$), $-C_nH_{2n+1}$ ($4 \leq n \leq 20$ and $-OCOC_nH_{2n+1}$ ($4 \leq n \leq 20$); Y is $-COO(CH_2)_n$ where n is 2 to 4 and R_3, R_4 are H, Cl to 4 alkyl, phenyl, COOH, OH, $COOR_5$ in which R_5 is Cl to 3 alkyl, $-CH_2CH_2CN$, $-CH_2CH_2OH$, $-CH_2CH_2$ -halogen or ; Z is $COOR_6$ (in which R_6 is $-CH_2C_6H_5$, $-CH_2CH_2C_6H_5$, or $-NHCH_2OH$, $-NHCH_2OR_7$ (in which R_7 is Cl to 4 alkyl, C_nH_{2n+1} ($1 \leq n \leq 7$) or H.
MC - CPI: A04-D A04-E A04-F06E A12-L02
UP - 1968-00
UE - 1971-08; 1971-32; 1972-30

09/331,729
FOR 10/17/2002